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THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No.	: 10/082,958	Confirmation No.: 5005
Appellants	: David C. Loda	
Filed	: February 26, 2002	
TC/A.U.	: 2144	
Examiner	: Greg C. Bengzon	
Docket No.	: PA-085.10645-US(02-179)	
Customer No.	: 52237	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

REPLY BRIEF

Dear Sir:

This Reply Brief is submitted in response to the Examiner's Answer mailed on November 1, 2006.

REAL PARTY IN INTEREST

The real party in interest is the United Technologies Corporation.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant or Appellant's legal representative which will directly affect or be directly affected by or have a bearing on the Board of Appeals decision in the instant appeal.

STATUS OF CLAIMS

Claims 1-19 are rejected and are on appeal. A true copy of the claims on appeal is attached hereto in Appendix A.

STATUS OF AMENDMENTS

No amendment was filed subsequent to the Examiner's final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

In one aspect of Appellant's disclosure, an integrated system (Appellant's specification, page 3, line 11-page 10, line 30) broadly comprises a portal (Id., page 5, line 29-page 6, line 22); a server (Id., page 3, line 29-page 6, line 10) communicating with the portal; at least one wireless local area network (Id., page 4, line 8-page 5, line 10) in communication with the server; at least one mobile device (Id., page 4, line 24 - page 5, line 28) in wireless communication with the at least one wireless local area network; and a means for enabling two-way communications between the portal and the server (Id., page 3, line 11-page 10, line 30).

In another aspect of Appellant's disclosure, a method for providing remote, interactive visual analysis of an apparatus (Id., page 3, line 11-page 10, line 30) broadly comprises the steps of providing a portal (Id., page 5, line 29-page 6, line 22), the portal in communication with at least one electronic device (page 4, lines 12-22; page 7, lines 1-15); providing a server (Id., page 3, line 29-page 6, line 10) in two-way communication with the portal via the internet; integrating the server into a wireless local area network (Id., page 4, line 8-page 5, line 10); connecting at least one mobile device (Id., page 4, line 24 - page 5, line 28) to the local area network; providing visual data from at least one visual device (Id., page 4, line 30-page 5, line 4) to the at least one mobile device; and receiving the visual data at the at least one electronic device.

Referring to the Figure, an integrated system is presented which is capable of remotely monitoring a deployed product, gathering data about the deployed product, and disseminating the data to interested parties (page 3, lines 11-14; See also Figure). Of particular note is the ability of system 10 to remotely acquire visual information pertaining to a deployed product, to allow for the remote viewing of such visual data, and to provide two-way communications between the viewer of such data and the instrument acquiring the data (Id., lines 14-19). The integrated system 10 is also capable of monitoring and restricting interested parties' access to its data, and can transmit command instructions from a remote viewer to alter the operation of the visual data acquiring instrument (Id., lines 19-23).

The integrated system 10 includes a server 22, where the term "server" refers to any and all devices capable of storing and disseminating data to at least one other electronic device, e.g., personal computers, microservers, and dedicated servers, (page 3, lines 26-29; page 4, lines 1-2). The server 22 may be provided with its own web address, a firewall, and security protocols known only to selected individuals, such as the manufacturer of the deployed product (page 3, lines 29-31). The server 22 may be deployed in a stationary structure such as the floor of a hangar or vehicle assembly plant (page 4, lines 3-5). The server 22 may also be located upon a moveable platform such as a boat, an airplane, a spacecraft, an automobile, a truck, or any other entity that is movable (Id., lines 5-8).

The server 22 is in communication with wireless LAN access point 20 to create a wireless local area network (LAN) 24 (page 4, lines 9-11). In operation, wireless LAN 24 establishes a

perimeter about wireless LAN access point 20 (Id., lines 11-13). Electronic devices, including server 22, within the perimeter established by wireless LAN 24 may logon to wireless LAN 24 and communicate via wireless LAN 24 with other electronic devices similarly logged on to wireless LAN 24 (Id., lines 13-17). However, other examples of wireless LAN access point 20 include any and all devices which may be located remote from server 22, which can communicate with server 22, and which are capable of establishing wireless LAN 24 (Id., lines 20-23).

The server 22 may monitor the condition of and/or gather data about a deployed product in a number of ways, for example, via the wireless LAN 24 connected to a mobile device 26 (Id., lines 24-26). In a preferred embodiment, mobile device 26 is a wireless PC tablet capable of wireless communication with wireless LAN 24 (Id., lines 27-28). Mobile device 26 may be carried or otherwise moved while in communication with wireless LAN 24 and thereby maintain the ability to communicate with server 22 (Id., lines 29-31).

Attached to mobile device 26 may be a visual data device 32 that acquires visual data pertaining to a deployed product and communicates the data to mobile device 26 (Id., lines 31-34). In one embodiment, visual data device 32 is a borescope (page 4, line 34-page 5, line 1). In another embodiment, visual data device 32 is a stereo image lens capable of capturing and communicating stereo images to mobile device 26 (page 5, lines 1-3). In a preferred embodiment, visual data device 32 communicates with mobile device 26 through connection 30 (Id., lines 4-5).

Configured as described, visual data device 32 acquires visual data about a deployed product, communicates the data to

mobile device 26 whereby mobile device 26 communicates the data to server 22 via wireless LAN 24 (Id., lines 11-14).

The server 22 may be programmed in any suitable language known in the art to gather the data about the deployed product and present the data to interested parties in a desired format (Id., lines 15-18). For example, the server 22 may be used to host a web page which provides information about one or more deployed products (Id., lines 18-20). The web page may have a menu which allows an interested party to gain access to gathered data about a particular deployed product (Id., lines 20-22). The data about the deployed product(s) may be organized on the server 22 and presented in any desirable format or manner (Id., lines 23-25). The server 22 may also be programmed to allow an interested party to carry out diagnostic operations on the deployed product(s) and/or to issue commands to visual device 32 via wireless LAN 24 and mobile device 26 (Id., lines 24-28).

In accordance with the present invention, the server 22 is capable of being accessed by interested parties via a portal 12 and the Internet or World Wide Web (Id., lines 29-31). To this end, the server 22 may have a communications device, such as a modem, built within it to allow communication between the server 22 and the portal 12 (page 5, line 31-page 6, line 1). The communication device may allow for radio frequency communications such as cellular communication, satellite communication, and/or wireless communication between the server 22 and the portal 12 (page 6, lines 1-4). In addition, communications between the server 22 and the portal 12 may be achieved by optical means such as an infrared link (Id., lines 4-6).

The portal 12 is hosted by an external server which may be any suitable server known in the art (Id., lines 7-8). The server hosting the portal 12 also has appropriate communication means associated with it to allow it to gain access to and be accessed by the server 22 (Id., lines 8-11).

The portal 12 may be provided with a number of software tools called gadgets to automatically analyze, organize, and sort the data which has been received from the server 22 (Id., lines 12-14). The data is preferably sorted so that different communities gain access to different portions of the data (Id., lines 14-16). For example, actual and potential customers of a vendor of a deployed product may form one community and have access to certain data, while support engineers and product designers may form a second community and have access to another form of the data (Id., lines 16-20). As can be seen from the foregoing discussion, the portal 12 offers great flexibility as to how and to whom the data is disseminated. One of the advantages to using the portal 12 is that its functionality can be carried out in a secure, user friendly, web-based environment (Id., lines 20-25). Members of a particular community can log in by presenting an identification and/or a password and gain access to current information about a deployed product (Id., lines 25-28).

Another advantage to using the portal 12 is that it can be used to receive data from server 22 and to upload information and data to the server 22 (Id., lines 29-31). Thus, an engineer, in communication with portal 12, can remotely receive visual data pertaining to a deployed product captured by visual data device 32 as well as send information to the visual data device 32 (Id., lines 31-35).

With continued reference to the FIGURE, there is illustrated a plurality of exemplary electronic devices in communication with portal 12 which may be utilized to communicate with a visual device 32 via portal 12, server 22, wireless LAN 24, and mobile platform 26 (page 7, lines 1-5). For example, goggles 14 may be utilized by a viewer of visual data captured by visual data device 32 (Id., lines 5-7). Such goggles 14 may facilitate the viewing of monographic or stereoscopic visual data captured by a video borescope or stereo image lens respectively (Id., lines 7-9). Computer 16 may be any computing device capable of receiving data and displaying it, as for example on a computer screen, and issuing commands, as for example through a keyboard associated with computer 16 (Id., lines 9-13). In addition, a mobile computer 18, such as a tablet PC, may be used to send and receive data to and from visual data device 32 (Id., lines 13-15).

While described with respect to goggles 14, computer 16, and mobile computer 18, the present invention is broadly drawn to encompass any and all means of receiving and displaying visual information as well as issuing control commands to control the acquisition of such visual data (Id., lines 16-20). For example, other devices which may be used in communication with portal 12 to receive and display visual data include 3D auto-stereoscopic projection systems, and 3D goggles (Id., lines 20-23).

Having thusly described the interaction of the components comprising system 10, there is herein provided a preferred embodiment whereby the present invention may be employed and utilized (Id., lines 24-27). The present invention can provide a live video image from a visual data device 32, such as a

standard borescope, directly connected to a mobile device 26 comprised of a wireless PC maintenance tablet (Id., lines 27-30). The wireless PC tablet can be carried around by a mechanic or the like and may serve as the mechanic's repository for work instructions, electronic manuals, and the like in a field or shop aerospace environment (page 7, line 30-page 8, line 2). The mechanic can thereby move freely about the work environment and position the borescope in desired proximity to a deployed product such as and aircraft engine under repair (page 8, lines 2-5). The wireless PC tablet is logged on to wireless LAN 24 and therefore communicates with server 22 (Id., lines 5-6). Server 22 has a unique IP address and is therefore accessible via the internet by portal 12 (Id., lines 6-8). As a result, sections of the PC tablet desktop (or the entire desktop) can be shared within the Portal architecture, consisting of portal 12 and the electronic devices in communication with portal 12, to allow for remote viewing, collaboration, and control of the borescope equipment between the operator and remote persons, such as engineers, managers, and customers sitting at their work or home PCs from anywhere in the world via an ordinary web browser (Id., lines 8-16).

Alternatively, a web-based application could be used to directly control the borescope, provide the image, and allow for communications remotely via a web interface (Id., lines 17-19). The remote control borescope feature builds upon local software-based borescope controls developed and sold by Olympus America Inc. of Melville, New York, and the Internet eBusiness Portal managed by Pratt & Whitney of Connecticut (Id., lines 19-23). Note that this wireless tablet/Portal system combination allows for a field mechanic to have all of the advantages of broadband internet connectivity and collaboration support with customer

and factory personnel, including, static picture, live video, voice-over-IP, touchscreen white board, and other PC functionalities in a mobile shop or field environment (Id., lines 23-29).

In an alternative embodiment, visual data device 32 consists of a stereo image lens marketed by Olympus America Inc., which provides a left eye-right eye double image (Id., line 30-32). The double image data is accessible by remote viewers via a host of electronic devices in communication with portal 12 including, but not limited to, three dimensional, stereo viewing devices, such as glasses, goggles, or the autostereographic viewing system now under development by the University of Strathclyde in Scotland (page 8, line 32-page 9, line 3). Such a configuration allows for remote, 3D viewing of the live video image in a remote lab or location for in-depth analysis (page 9, lines 3-5). The remote 3D viewing permits natural three dimensional interpretation of the subject matter for significantly enhanced viewing and diagnostics by a remote person, and has broad applications in many other fields besides aerospace, including manufacturing, medical, surveillance, pharmaceutical, and other types of inspection activities (Id., lines 5-11).

Because the present invention provides two-way communication between a visual data device 32 and remotely located electronic devices used to view such data, viewers may issue control commands to the visual data device 32 based upon the visual data they receive (Id., lines 12-16). For example, a viewer using goggles 14 to view auto-stereoscopic data captured by a stereo image lens functioning as visual data device 32, may send a command instruction to alter the orientation of visual

data device 32 (Id., lines 16-20). Such a command may cause the stereo image lens to alter its orientation by zooming in on an engine part or panning left or right about a deployed product (Id., lines 20-22). In this manner, remote viewers of visual data acquired by visual data device 32 may analyze visual data as well as direct the acquisition of such data (Id., lines 22-25).

Advantages of such a system include allowing multiple experts in different locations to quickly and effectively collaborate on an inspection of a turbine engine part, then make and document a decision that would either remove the engine for overhaul or allow for continued operation (Id., lines 26-30). The savings in time and money would be significant, as presently a part requiring inspection would have to wait until the appropriate experts could physically travel to the site in order to perform the inspection (Id., lines 30-34).

While described in detail with respect to a stationary server 22 located, for example, in an aircraft hangar, the server 22 may in an alternative embodiment be located upon a moveable platform (page 10, lines 1-4). One advantage of locating server 22 on a moveable platform is to enhance the ability of system 10 to provide more flexible remote acquisition of data (Id., lines 4-6). For example, a moveable platform such as a helicopter could have installed upon it a server 22 in internet communication with portal 12 (Id., lines 6-9). The helicopter could be flown to a remote location and land amongst one or more deployed helicopters requiring diagnostic attention (Id., lines 9-11). Wireless LAN 24 is configured to encompass the area within which the helicopters reside (Id., lines 11-12). As a result, mechanics carrying mobile devices 26, such as PC

tablets, connected to video borescopes can position the borescopes to gather visual data of, for example, the helicopter's engines (Id., lines 12-16). In this manner, remote viewers communicating with portal 12 can both receive the visual data collected by the borescope and issue control commands to interactively examine the engines (Id., lines 16-19).

GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

There are three pending rejection(s) of claims 1-4, 6-12 and 14-30, all of which are being appealed, as set forth below.

(1) Claim 13 is rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

(2) Claims 1-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Charles (U.S. Patent No. 6,449,103) in view of Pugliese et al. (U.S. Publication No. 20010044751).

ARGUMENTS

I. CLAIM 13 IS DEFINITE AND PATENTABLE UNDER 35 U.S.C. §112, SECOND PARAGRAPH

In response to the Examiner's Answer dated November 1, 2006, Appellants maintain and renew their original remarks and arguments set forth in Appellants' Appeal Brief filed on June 20, 2006.

Appellants submit additional comments herein in response to remarks made by the Examiner in his Answer.

The Manual of Patent Examining Procedure ("MPEP") §2173.04 recites in part the following:

> "Breadth of a claim is not to be equated with indefiniteness. In re Miller, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. §112, second paragraph."

Appellants contend the scope of the subject matter embraced by the language of claim 13 is clear.

Appellants' dependent claim 13 recites the following:

> "13. The integrated system of claim 1, wherein said server is located on said at least one movable platform."

Throughout the prosecution of the claims, Appellants have not indicated the scope of the term "movable platform" is different than the manner in which the term is defined in Appellants' specification. Appellants have consistently referred

to page 4, lines 5-8 of Appellants' specification, which states as follows:

> "In another embodiment, server 22 may be located upon a movable platform. The movable platform may be a boat, an airplane, a spacecraft, an automobile, a truck, or any other entity that is movable."

The Examiner continues to solely focus upon the phrase "or any other entity that is movable", and assert this phrase renders indefinite the entire meaning of the claim term "movable platform" of dependent claim 13. Appellants contend the phrase "or any other entity that is movable" must be read in context, that is, read in light of the entirety of the sentence. When reading the entire sentence, one of ordinary skill in the art recognizes the "or any other entity that is movable" refers to other movable platforms that are similar to "a boat, an airplane, a spacecraft, an automobile, a truck". One of ordinary skill in the art would know from the plain language of the claim and the specification that not just anything that moves can be included and that the "any other entity that is movable" makes reference to "a boat, an airplane, a spacecraft, an automobile, a truck". The fact that the phrase "or any other entity that is movable" covers a broad range of possibilities in the specification makes the claim broad, but not indefinite. Appellants contend the scope of the claim language is limited by page 4, lines 5-8 of the specification and Appellants' aforementioned statement made during the prosecution history of the present application.

Appellant respectfully requests the Board withdraw the rejection against claim 13 under 35 U.S.C. §112, second paragraph, and hold claim 13 is allowable.

II. CLAIMS 1-19 ARE PATENTABLE OVER THE COMBINATION OF U.S.P.N. 6,449,103 TO CHARLES IN VIEW OF U.S. PUBL. NO. 20010044751 TO PUGLIESE UNDER 35 U.S.C. §103(A)

In response to the Examiner's Answer dated November 1, 2006, Appellants maintain and renew their original remarks and arguments set forth in Appellants' Appeal Brief filed on June 20, 2006.

Appellants submit additional comments herein in response to remarks made by the Examiner in his Answer.

The Examiner's response to Appellants' arguments is set forth at pages 13-16 of the Examiner's Answer mailed on November 1, 2006.

First, Examiner states in part that Pugliese is not relied upon to disclose 'at least one mobile device'. The Examiner notes that Charles fully disclosed 'at least one mobile device' (Charles - Figure 178, Figure 179, Items 179t, 179r; col. 59, ll.5-25; col. 60, ll. 1-15; Figure 64; Figure 180; col. 45,, ll. 55-60; col. 46, ll. 35-50; col. 47, ll. 20-30).

The Examiner is confusing the various control means taught by Charles, such as control means for games and robotic devices, interactive input devices and goggles, with the claim term "at least one mobile device" as recited in Appellants' independent claims 1 and 14. Appellants draw the Examiner's attention to the FIGURE of the present application and at least at page 4, ll. 24-31 of Appellants' specification. Appellants' "at least one mobile device" is indicated by reference numeral 26, and is described in part in Appellants' specification as, "a wireless PC tablet capable of wireless communication with wireless LAN

24." Appellants' specification further discloses that, "Mobile device 26 may be carried or otherwise moved while in communication with wireless LAN 24 and thereby maintain the ability to communicate with server 22."

FIGS. 64 and 178-180 and the aforementioned supporting text of Charles cited by the Examiner do not illustrate the "at least one mobile device" as recited in Appellants' independent claims 1 and 14. FIGS. 64 and 178-180 and supporting text cited by the Examiner may at best correspond with the electronic devices, such as goggles 14, computer 16, and mobile computer 18, that communicate with portal 12. However, Appellants are not convinced the Examiner has sufficiently explained how the combination of Charles in view of Pugliese could also adequately teach Appellants' claim term "electronic device" of independent claim 14. It is apparent from the Examiner's statements that the he has been misinterpreting the meaning of the claim terms "at least one mobile device" and "electronic device" all along.

Charles cannot be relied upon to teach or suggest the claim term "at least one mobile device" as the Examiner asserts. Should the Examiner now turn to Pugliese for such teaching or suggestion, Pugliese cannot provide either such teachings or suggestion. Pugliese discloses only using stationary cameras to view products in a retail shopping environment. The stationary cameras taught by Pugliese are not same or even suggestive of using the "at least one mobile device" recited in Appellants' independent claims 1 and 14.

Secondly, the Examiner continues to maintain Charles is concerned with the distribution and display of video data over the internet to a group of users. Applicants remain steadfast on this point and reassert their remarks and arguments set forth at

length in the Appeal Brief dated June 20, 2006 as to why Appellants firmly believe Charles and Pugliese are not analogous art.

Thirdly, the Examiner disagrees with the Appellants' argument wherein Appellant characterized the rejection as being based upon Pugliese in view of Charles in Appellants' Appeal Brief dated June 20, 2006. Appellants took the opportunity to present an argument in the alternative should the Board of Patent Appeals & Interferences chooses to apply the references in a manner differently than contemplated by the Examiner.

Appellant contends claims 1-19 are patentable over the combination of U.S.P.N. 6,449,103 to Charles in view of U.S. Publ. No. 2001/0044751 to Pugliese under 35 U.S.C. §103(a).

Appellant respectfully requests the Board withdraw the rejection against claims 1-19 under 35 U.S.C. §103(a) and hold claims 1-19 are allowable.

CONCLUSION

For the reasons set forth above, the honorable Board of Appeals is hereby requested to reverse the Examiner's rejection of claims 1-19 based on all of the cited references discussed above.

CLAIMS APPENDIX

Attached hereto is a Claims Appendix A containing all claims in the application and which form the basis for this appeal.

EVIDENCE APPENDIX

None.

SPECIAL PROCEEDINGS APPENDIX

None.

If any other fees are required in connection with this case, it is respectfully requested that they also be charged to Deposit Account No. 21-0279.

Respectfully submitted,

DAVID C. LODA

By _____

Ross J. Christie
Attorney for Appellant
Reg. No. 47,492
Tel. (203) 777-6628 x. 116
Fax. (203) 865-0297

IN TRIPLICATE
Date: January 3, 2007

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on January 3, 2007.

_____.
Antoinette Sullo

Appendix A
Claims Appendix

1. An integrated system comprising:

a portal;

a server communicating with said portal;

at least one wireless local area network in communication with said server;

at least one mobile device in wireless communication with said at least one wireless local area network; and

a means for enabling two-way communications between said portal and said server.

2. The integrated system of claim 1, wherein said portal may be accessed by at least one mobile device in communication with said portal.

3. The integrated system of claim 1, wherein said at least one local area network is physically integrated with said server.

4. The integrated system of claim 1, wherein said at least one local area network is in wireless communication with said server.

5. The integrated system of claim 2, wherein said at least one mobile device comprises a PC tablet.

6. The integrated system of claim 1, further comprising a borescope and said borescope being in communication with said mobile device.

7. The integrated system of claim 6, wherein said borescope communicates with said mobile device via a data feed wire.

8. The integrated system of claim 7, wherein said mobile device comprises at least one USB port for receiving said data feed wire.

9. The integrated system of claim 2, further comprising a visual data device in communication with said at least one mobile device.

10. The integrated system of claim 19, wherein said stereographic viewing system comprises a stereo image lens in communication with said at least one mobile device.

11. The integrated system of claim 10, wherein said at least one mobile device comprises at least one USB port for receiving data from said stereo image lens.

12. The integrated system of claim 1, wherein said server is addressable by a unique IP address and wherein said server hosts at least one web page.

13. The integrated system of claim 1, wherein said server is located on said at least one movable platform.

14. A method for providing remote, interactive visual analysis of an apparatus, comprising the steps of:

providing a portal, said portal in communication with at least one electronic device;

providing a server in two-way communication with said portal via the internet;

integrating said server into a wireless local area network;

connecting at least one mobile device to said local area network;

providing visual data from at least one visual device to said at least one mobile device; and

receiving said visual data at said at least one electronic device.

15. The method of claim 14, comprising the additional step of issuing control commands to said at least one visual device from said at least one electronic device.

16. The method of claim 15, wherein said control commands are issued in response to receiving said visual data by said at least one electronic device.

17. The method of claim 16, further comprising altering an orientation of said visual device in accordance with said control commands.

18. The method of claim 14, wherein said receiving of said visual data is limited by a community affiliation of said one or more electronic devices.

19. The integrated system of claim 9, wherein said visual data device comprises a stereographic viewing system.

Appendix B

Evidence Appendix

None.

Appendix C

Related Proceedings Appendix

None.